AMENDMENTS TO THE CLAIMS

1. (Canceled)

2. (Currently Amended) The method according to claim [[1]]19,

wherein the compensation of the wobbling ~~and/or~~ and the rotating of the sample to be measured is implemented by a spherical mirror, where the sample is located in the centre of the curvature of the spherical mirror.

3. (Cancelled)

4. (Currently Amended) The method according to claim [[1]]21,

wherein a separation of the radiation signal for the temperature measurement and the radiation signal for the spectral-optical measurement is implemented by synchronised blanking of the irradiated light with respect to the spectral-optical measurement.

5. (Currently Amended) The method according to claim [[1]]21,

wherein the blanking is implemented by means of a shutter.

6. (Currently Amended) The method according to claim [[1]]21,

wherein ~~the~~ synchronisation of the blanking takes place with respect to the rotation of a sample mounted on ~~the~~ a sample carrier.

7. (Currently Amended) The method according to claim [[1]]6,

wherein additionally a measurement of ~~the~~ a radial temperature profile of the sample carrier takes place.

8. (Currently Amended) The method according to claim [[1]]20,

wherein a separation of the pyrometer optical path and the optical path of the spectral-optical system is caused by a beam dividing polarizing prism ~~in case of~~ when said spectral-optical measurement is reflectance anisotropy spectroscopy.

9. (Currently Amended) The method according to claim [[1]]20,

wherein the pyrometer optical path is separated from the optical path of the spectral-optical measurement, where the angle of detection of the pyrometer with respect to the ~~sample perpendicular~~ line perpendicular to the sample is identically equal to the angle of incidence of the spectral-optical measurement with respect to the ~~sample perpendicular~~ line perpendicular to the sample.

10. (Currently Amended) The method according to claim [[1]]19,

wherein ~~the~~ a calculation of ~~the~~ an effective emissivity $<\epsilon>$ of a sample is carried out according to the formula

$$<\epsilon> = (1-R_P) * (1+R_{ATS}*R_P) = \epsilon_P * (1+ R_{ATS} *R_P)$$

where R_P is the reflectance of the sample, R_{ATS} the reflectance of the anti-wobbling-mirror and ϵ_P the emissivity of an absorbing sample without anti-wobbling-optics.

11. (Currently Amended) The method according to claim [[1]]19,

wherein ~~the~~ a calculation of ~~the~~ an effective emissivity $<\epsilon>$ of a transparent sample and transmissive measurement is carried out according to the formula:

$$<\epsilon> = \epsilon_{PT} * T_P * (1+R_{ATS}*R_P + R_{ATS} *T_P^2 * R_{PT})$$

where T_P is the transmission coefficient of the sample, R_P is the reflectance of the sample, R_{ATS} the reflectance of the anti-wobbling-mirror, R_{PT} the reflectance of ~~the~~ a sample holder and ϵ_{PT} the emissivity of ~~the~~ a sample carrier.

12. (Currently Amended) The method according to claim [[1]]19,

wherein the spectral-optical measurement is carried out using only one wavelength.

13. (Currently Amended) An apparatus for the determination of characteristic layer parameters, comprising:

a spectral-optical system[[,]];

at least one emissivity-corrected pyrometer; ~~and~~

analysis means[[,]]; and

~~comprising~~

means for compensation of the wobbling ~~and/or~~ and the rotating of the sample

~~and/or~~

~~means for blanking of the irradiated light~~including a spherical mirror, wherein the sample is located in the centre of the curvature of the spherical mirror.

14-15. (Cancelled)

16. (Currently Amended) The apparatus according to claim 13,

wherein the means for the compensation of the wobbling ~~and/or~~ and the rotating of the sample comprises a lens, a beam splitter and an aperture.

17. (Cancelled)

18. (Currently Amended) The apparatus according to claim 13,

wherein the apparatus additionally comprises at least one beam splitter ~~and/or~~ or at least one beam dividing polarizing prism.

19. (New) A method for the determination of characteristic layer parameters by irradiation of light on to a layer structure comprising the steps of:

determination of the temperature of the layer by means of at least one emissivity-corrected pyrometer,

spectral-optical measurement of the reflected light,

determination of the characteristic layer parameters,

wherein a wobbling and rotating of a sample to be measured is compensated by a lens, a beam splitter and an aperture.

20. (New) A method for the determination of characteristic layer parameters by irradiation of light on to a layer structure comprising the steps of:

determination of the temperature of the layer by means of at least one emissivity-corrected pyrometer,

spectral-optical measurement of the reflected light,

determination of the characteristic layer parameters,

the pyrometer optical path and the optical path of the spectral-optical system being guided separately of each other.

21. (New) A method for the determination of characteristic layer parameters by irradiation of light on to a layer structure comprising the steps of:

determination of the temperature of the layer by means of at least one emissivity-corrected pyrometer,

spectral-optical measurement of the reflected light,

determination of the characteristic layer parameters,

a separation of a radiation signal for the temperature measurement and a radiation signal for the spectral-optical measurement being implemented by blanking the irradiated light.